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Stewardship among lifestyle oriented rural landowners

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Keywords

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Stewardship among lifestyle oriented rural landowners

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Abstract

Changes in land ownership associated with amenity migration are affecting the demographic, cadastral, and ecological conditions of rural landscapes. These changes and concerns about their impacts on natural resource management, including ecological conservation, relate to both the structural consequences of land ownership change, land subdivision, and to the motivations, management ability, and attitudes of lifestyle oriented rural landowners. Based on an Australian case study near Sydney, NSW, this paper examines the motivations and practices of such landowners, assesses potential consequences for vegetation, and characterises the landowners according to three stewardship types.

Keywords: amenity migration; hobby farming; natural resource management; restoration ecology; stewardship; ecosystem fragmentation

1. Introduction

In many parts of the world, including Australia, the relative decline of agriculture and lifestyle preferences are driving population change in areas that are accessible from urban centres or which have features that make them attractive to in-migrants. Since the 1970's at least, accessible and attractive rural areas in Australia, Canada, the United States, and Britain have captured growing shares of population growth (Burnley and Murphy, 2004, Mitchell, 2004).

In such areas land is being transferred from conventional agricultural use by commercial farmers to more heterogeneous ownership. This process is often accompanied by land subdivision and residential development. The new, usually in-migrant owners, are referred to in multiple ways: "small lifestyle farmers" (Hollier and Reid, 2007), "hobby ranchers, trophy ranchers, amenity buyers,…conservation buyers" (Gosnell *et al.*, 2007) and "blockies"(Klepeis *et al.*, 2009). Other related terms include hobby farmers, part-time farmers, and peri-urban landholders (Maller *et al.*, 2007).

In general, the characteristics of these new owners include limited, if any, dependence on farm income, relatively high interest in environmental stewardship, small-scale farming operations, sub-commercial landholdings, and a focus on landownership for "lifestyle" reasons. As is the case with full-time farmers, however, the motivations and practices of these landowners are diverse. The use of any one term to describe them will always be problematic. In this paper we use the term "new rural landowners" (NRLs) to encompass the diversity of landownership among these groups: "new" distinguishes lifestyle oriented, non-commercial landowners from the full-time or commercial farming landowners for whom farming has been a key, if not the only,

source of income; “rural” has currency as a flexible and widely used signifier of landscapes, land based activities, and social formations; and “landowners” avoids making reference to any particular land use such as hobby farming.

The presence of NRL’s who commonly value the land more for its amenity and ecological characteristics than its agricultural value alone are bringing changes in land management and ecosystem function and structure, including land cover. There is active debate in the scholarly literature over the significance of these changes, the ecologies being created, and indeed over how to evaluate the biophysical changes. Increasingly, at the centre of these debates is not nature *per se* but the human aspirations, presence, and management practices that are creating natures of all kinds (Robbins, 2001). As we argue here, this process of nature creation is likely more diverse and possibly more varied in outcome than in the agricultural landscapes that they are replacing.

Drawing on a case study from New South Wales (NSW), Australia, we examine the motivations and practices of a group of NRLs and identify three unique stewardship types among them. The notion of land stewardship has been an important topic in nature-society studies for well over a century (Worster, 1993). Rural sociologists have used the concept to investigate attitudes and behaviour among farmers but have generally found that there are no strong links between “positive” environmental attitudes and adoption of improved practices (Lawrence *et al.*, 2004). This research tends to conceptualise stewardship in terms such as passing the land on undamaged, protection, and sustainability (Curtis and de Lacy, 1998, Lawrence *et al.*, 2004, Vanclay, 1992). The concept is then operationalised in surveys via items designed to elicit scores on attitudes, beliefs, and the extent to which certain behaviours are

practiced (e.g., tree planting, farm planning). Our use of the term stewardship is distinct from this usage and, perhaps, more traditional (Worrell and Appleby, 2000).

We use stewardship to refer to landowners' sense of what constitutes responsible and moral use such that their own and broader interests are met. In this sense the term is more flexible and not necessarily tied to modern conceptions of sustainability or accepted "best practice". Nor does it assume commonality of interests. Rather it reflects the norms and values about land and ideas of appropriate use that landowners have when acquiring their land and that they develop in the course of landownership. Casting stewardship in this way, as a general stance towards land use, assists in examination and analysis of landownership as a package of intentions, motivations, norms, activities, and interactions.

In this paper we identify categories of NRL stewardship that enhance understanding of the creative process of landscape development and the often dichotomous representations of NRLs. Our case study shows that a more flexible and dynamic concept of stewardship is an important part of understanding landscape evolution.

2. Natural Resource Management and NRLs: Management Disaster or New Blood?

The presence of NRLs presents complex ground for a host of natural resource management (NRM) issues (Bunker and Houston, 2003, Dwyer and Childs, 2004, Walker and Hurley, 2004). In relation to our focus here, the delineation of this terrain revolves around two general themes. The first relates to the interest and ability of NRLs

in land management. Issues here include the level of knowledge, interest, and skill of NRLs in animal husbandry and NRM, turnover of ownership and loss of knowledge, and part-time residence (Gosnell *et al.*, 2006, Gosnell and Travis, 2005, Hollier and Reid, 2007, Klepeis *et al.*, 2009, Mendham and Curtis, In Press). Related to this are concerns about management along and across boundaries and consequences for social and ecological relationships that influence landscape processes and structure (Haggerty and Travis, 2006).

An alternative perspective is that NRLs represent a positive change in ownership and management. They replace existing landowners who may have reduced management effort due to low returns from agriculture and expectations of land sales (Heimlich and Anderson, 1987, Liffmann *et al.*, 2000). Moreover, there is the possibility that these new owners are not tied to existing cultures of practice among farming communities (Wilson, 2008) and bring enthusiasm for environmental stewardship, a willingness to try new things, and the resources to put their ideals into practice.

The second general theme relates to the structural characteristics of landscapes characterized by increasing fragmentation. This fragmentation takes two closely associated forms, though the end result for ecological processes and NRM may be the same - landscape scale fragmentation. One is increasingly diverse land ownership and associated vegetation management which can lead to variable patterns; the other is an increase in the sub-division of farms for residential or hobby farm development, thus increasing heterogeneity and possibly shifting vegetation dynamics and affecting resilience.

Another set of concerns relates to a mismatch between the scale of subdivision and associated land management in the new land parcels, on the one hand, and the scale of ecological processes on the other. The very process of subdivision and increased intensity of human presence and development can have ecological impacts that are expressed at the parcel and landscape scale (Gude *et al.*, 2006, Kearney and MacLeod, 2006a, Knight *et al.*, 1995, Lenth *et al.*, 2006, Pejchar *et al.*, 2006, Radeloff *et al.*, 2005, Riebsame *et al.*, 1996). The proliferation of land parcels brings new houses, gardens, access roads and tracks, firebreaks, and fencelines. These all introduce enhanced edge and other effects on flora and fauna. In Australia, Kearney and MacLeod (2006a, 2006b, 2006c) argue that in peri-urbanising landscapes the outcome of subdivision and increased rural residential development is to simplify and fragment landscapes in a manner that cannot be offset by localized restoration efforts.

While much of the above alerts us to issues of landscape-scale change, the discussion also points to the importance of NRM by individual NRLs and the extent to which they manage their land collaboratively. The question of whether NRLs represent a cohort of poor land managers, the growing presence of which has negative NRM and ecological outcomes, or a wave of NRM innovators is reflected in published research. For example, researchers have identified both environmental benefits and adverse effects in the behaviour of NRLs (Gosnell *et al.*, 2007) and a lack of consistency between pro-environmental attitudes and actual behaviour (Mendham and Curtis, In Press, Peterson *et al.*, 2008). In relation to land cover, relatively high rates of increased tree or woody land cover or canopy closure are reported for land owned by NRLs compared to full time farmers or ranchers (Kristensen, 1999, Primdahl, 1999, Wacker and Kelly, 2004, Walker *et al.*, 2003). Elsewhere ecologists have identified ecological

simplification on rural residential land relative to reserves and intact ranches (Hansen *et al.*, 2005, Maestas *et al.*, 2003, 2001).

Our study of Jamberoo Valley contributes to the growing body of literature on land use and NRM by NRLs in general, and in Australia in particular. Our approach is driven by three key considerations. First, the on-property land management practices of NRLs in Australia (Holmes, 2005) ─ and to significant extent overseas (Wilson, 2008) - ─ remain unclear. Second, a number of researchers conclude that fine-grained research relating to "individual domestic practices" (Holmes, 2005) is central to understanding these emerging rural landscapes (for example see Paquette and Domon, 2003, Walker *et al.*, 2003). And third, many of the questions (but certainly not all) regarding land management in dynamic rural landscapes are appropriately addressed through qualitative and ethnographic methods (Kristensen, 1999, McCarthy, 2005, Sayre, 2004).

3. Jamberoo Valley: Employment, Population and Land Use Change

Jamberoo Valley, south of Sydney in the Kiama local government area (LGA), (Figure 1) is close to Sydney, highly accessible, and has attractive vistas with green rolling hills and pastures, sandstone escarpment, significant forest cover, coastal views, waterways, and proximity to beaches (Figure 2). The town of Jamberoo (population approximately 900) provides sporting and community facilities, a primary school, and basic retail services.

Jamberoo Valley represents an important case study because the region is highly valued as a coastal hinterland and for its "rural" and scenic character. In addition, lying close to fast growing urban areas, researchers and government officials alike have

identified conservation concerns, such as the vulnerability of remnant native vegetation. Currently, planning instruments strongly limit subdivision in the valley and seek to protect environmental assets (e.g., native vegetation). Despite government concerns, however, the population and residential ownership of rural land in the valley is increasing as individual land parcels are sold by farmers to NRLs. These land transfers are seen as part of a wider problem; the loss of high quality agricultural land to subdivision and "lifestyle" ownership in the Sydney region and elsewhere in Australia (Gillespie, 2003, Hindle *et al.*, 1987, Houston, 2005). In Jamberoo Valley, high annual rainfall (1800mm) and good soils (Hindle *et al.*, 1987) have not been enough to prevent the decline of dairying in the face of progressive reductions in industry protection (Edwards, 2003) and low returns.

The attractive landscape and proximity to Sydney and other urban areas have led to high land prices. Farm expansion through land purchase is not a viable option for survival of the dairy and beef enterprises in this area whereas land sale becomes an extremely attractive option for farm families. As a result, like farmers throughout the greater Sydney area, many in Jamberoo Valley have sold part or all of their farms. There is a highly visible presence of these land transfers in the form of residential development on these parcels of land. This is also reflected in almost threefold population growth in non-urban Jamberoo Valley (in the Kiama LGA) between 1976 and 2001 (ABS Census' of Population and Housing 1976-2001).

4. Methodology

We interviewed twenty-five landowners in Jamberoo Valley. Their property sizes ranged from 0.4 to 61 hectares (1-150 acres), half owned under 10 hectares, and

40% had between 10 and 50 hectares (25-125 acres). We focussed exclusively on amenity landownership due to the diversity of non-commercial owners that we encountered and because this is an under-researched group. The sample of landowners was initially selected at random from a map of parcel blocks that were wholly or partly contained within a rectangular east-west transect that was drawn to encompass multiple land types in Jamberoo Valley. We visited the selected land parcels on both weekdays and weekends to request interviews with the owners. Where the block did not contain a residence and we were not able to identify an owner who was not a full-time farmer and who we could contact, we looked to adjacent blocks until we identified a part-time, amenity or hobby farmer landowner. This method probably favours interviews with landowners who live on their land, rather than those who primary residence is elsewhere. Only four of the interviewees had their primary residence elsewhere. To address this in the next stage of our research we are collaborating with local government in a mail survey to rural ratepayers. Interviews contained both structured and unstructured components. Given the exploratory nature of the research we encouraged elaborations of answers. More discursive responses were noted and written up in more detail immediately following the interview.

Analysis followed three paths. First, interviews were coded and entered into Excel to facilitate the production of descriptive quantitative information, and then imported into NVivo qualitative data analysis software. Second, interviews were auto coded in NVivo by question headings. This “descriptive coding” allowed us to examine responses to particular questions and readily access the broader context of answers. These steps allowed us to then undertake “coding on”, wherein a process of analytical coding is used to ask questions and categorise data. For example, as we examined the

coding by questions relating to weed and vegetation management, the notion that most were "managing at the edge" emerged and this generated further coding that allowed us to test the idea.

Third, the query options in NVivo that allow coding to be further interrogated and relationships across data to be identified were used to combine and analyse data from both steps one and two. This analysis not only yielded further useful quantitative data about our interviewees, but by using outputs such as matrices we could readily examine in more detail interviewees' responses. Such queries can also be used to test ideas emerging from analysis or impressions generated during the interview process. For example, during the interview process, we were left with the strong impression that poor land conditions at purchase were strongly associated with prior use as a commercial farm. Through a process of coding for prior use, a matrix query of prior use by state at purchase, and further examination of relevant interview data, we were able to test, and largely reject, this association. The process of moving between different forms of data ─ in a process of critically developing and testing ideas ─ is a strength of the qualitative analysis we describe.

5. Interview Results

5.1 Why Buy Rural Land?

As elsewhere in Australia (Hollier and Reid, 2007) lifestyle aspirations are the primary driver of rural land ownership in Jamberoo Valley. Overwhelmingly, the reasons for buying rural land were expressed in terms of how interviewees want to live their lives, the social and physical environments in which they wish to live, and the kinds of experiences they want to have for themselves and their families. The reason for

buying rural land mentioned by the largest number of interviewees is their desire for contact with or immersion within some form of "rural nature". This overarching goal revolves around multiple themes. An important one, with some overlap with wanting to provide a "rural life for kids", is to be "outside" and to have contact with domestic or wild animals and other elements of the natural environment, such as rivers and plants. For one interviewee, this desire is associated with being closer to farming and less materialistic, with visible daily reminders of "where food comes from and that it's not all about stuff". Others had past personal or family links with rural land that were important to them and landownership provided a means to renew or maintain these.

In an association that may have implications for NRM engagement, eight interviewees mentioned a desire for "space". By this they meant variously "a bit of land to stretch out in", to have "nobody imposing", "seclusion", distance from other people, an ability to "control" their own environment, and to be able to do as they wished on their land. This reason was negatively associated with membership of community-based NRM groups, such as Landcare. Landowners who wanted "space" were the most ardent native vegetation restorers. Their enthusiasm for restoration, however, means that they spend considerable amounts of time working on their own land and thus they do not wish to divert their resources to being part of groups or programs that they perceive as time-consuming. Indeed, one of these landowners had been a member of a Landcare group and had become so frustrated with what he saw as the dominance of committee or "process" work that he left, deciding he was better off "getting on with it" on his land. This desire for 'space', avoidance of participation in community groups, and an interest in focusing on one's own land is of relevance for NRM programs delivered via groups. Whether more enthusiastic restorationists are generally individualistic in this way we

are unable to answer nor do we know if they eschew organised groups in favour of more informal networks.

5.2 Grazing and Agricultural Activities

Agricultural and grazing activities by landowners include running cattle and horses, growing crops, horticulture, experimental farm forestry, and providing access to land to farmers. Sixteen interviewees are running stock, either on a semi-commercial basis or for "recreational" or non-commercial reasons. Three are raising crops of some sort; all of these are also grazing at least some stock. Eight interviewees are providing access to their land to farmers, either as part of a formal arrangement to defray costs or, more commonly, as part of informal arrangements in exchange for land maintenance.

On the basis of their grazing activity, we categorise landowners as either "no stock", "non-commercial" or "semi-commercial" (Table 1). Among our interviewees, no landowners own sufficient land or stock to run an enterprise that could generate sufficient household income without supplementation from other sources. Among semi-commercial interviewees, the median cattle herd size is 35 head, and the range is six to one hundred head. Two of these cattle owners described themselves as "commercial" and two also had over thirty horses for recreational and competition purposes. What landowners describe as at least semi-commercial grazing is occurring across property sizes, including on properties less than nine hectares, and both semi-commercial and non-commercial interviewees had reduced stock numbers in recent years for a variety of reasons, including dry conditions, to allow pasture regeneration or to reduce commitments. All semi-commercial stock owners said that they practiced some form of pasture improvement, though what they meant by this varied considerably.

The most common reason for running stock or for growing crops on a semi-commercial basis was to help meet or defray the costs of owning rural land. Four of the semi-commercial interviewees articulated a strong interest in making money from grazing but in all cases any such income was or would be a supplement to other off-farm (mainly retirement) income. Another significant reason for having stock was their role as "lawnmowers". Most had cattle or other animals such as goats to help keep the grass down or used controlled cattle grazing to help control weeds, as part of activities aimed at reclaiming pasture or restoring native vegetation.

A large minority of interviewees (11) expressed reasons that are related to their desire for a rural lifestyle, or to their views about how rural land should be used. Some wanted a cow or goat (or two) for their children or grandchildren to see and experience. Some interviewees run stock for a "hobby" or to keep themselves busy in retirement; in the words of a spouse in one such case the cattle "keep [him] off the streets". For the owner of the largest cattle herd, it would have been "boring to sit there and do nothing". For others, stock are part of the aesthetic of a rural landscape. For example, one semi-commercial cattle owner said that they "like cows, [they are] big fat lovely animals". Finally, a retired landowner who was experimenting with stands of native trees was doing so "more for a challenge than for use as a timber crop" and had found it an "interesting exercise in working out what grows best".

Even though interviewees generally knew that they were not running fully commercial operations knowing that the land was being "used" or was "useful", "productive" in some way, and was not "just sitting there" but being used even if in just a "small way" was important to many interviewees. A little over half of those running

stock semi-commercially expressed views along these lines. Several of those who do not run stock or grow crops expressed a sense of guilt about occupying rural land for purely residential and lifestyle purposes, one such interviewee said that as a consequence they were not "real rural owners".

In general, interviewees were concerned about the loss of agricultural land in the region and, at least among those who run stock semi-commercially, there was a desire to put some distance between themselves and this process. As found elsewhere (Holloway, 2002, Lage, 2005) among many interviewees there was a strong ethic of productivity, that the land needed to be used and to pay for itself at least in part. While many interviewees who are running stock semi-commercially knew that theirs were small operations, with self-deprecating comments about hobbies, they nonetheless generally took their operations seriously.

5.3 Planting and Weeding

The interviewees are almost ubiquitously engaged in planting and weeding activities. Planting choices, both around the houses and beyond, are important in creating the ecologies of these new rural landscapes and provide insights into the relationships with nature that NRLs both bring to land ownership and, importantly, develop in the course of land ownership.

Twenty interviewees had built houses since they had bought their land and most of these and others had established gardens and/or landscaping around the house. As Figure 3 shows, their broad choice of species is to a large extent (64% of those who established a garden) either a mix of native and non-native species or predominantly

non-natives. Forty-four percent of the fifteen interviewees who had planted a windbreak or visual shield had similarly planted mainly non-natives or a mix of native and non-natives. The natives that are planted are often but not always from the local area, especially in gardens where a wide variety of species are planted. To the extent that we were able to elicit choices for gardens/house landscaping and windbreaks/visual shields, aesthetics and personal preferences dominated, followed by what is available at nurseries in the region. Two interviewees noted that they experienced tension between what they felt they *should* be planting – native species – and their personal preferences for non-Australian plants. For one interviewee, a keen gardener but also a native flora and fauna enthusiast, the tension was heightened by advice from a local garden club to plant at least one species considered invasive on the NSW south coast. Two others had planted tree or shrub species in their garden that are potentially invasive in some parts of Australia (Groves *et al.*, 2005). Clearly, Jamberoo Valley is a dynamic and increasingly intense landscape in terms of the plant cover being introduced via garden, windbreak, and visual shield plantings.

The other main planting activity is plantings other than in house gardens, windbreaks and along driveways. Sixteen (64%) of interviewees had undertaken some form of such planting, although for most it was to a minor extent, consisting of small numbers of relatively isolated trees. As this "other planting" is primarily by landholders who concern is to restore or replant native vegetation, these landholders are mainly planting Australian native vegetation. This does not necessarily mean that they are planting species from the Jamberoo area. For those interviewees who had undertaken relatively extensive plantings of this sort, the choice of species appears to be primarily driven by three rationale. First, was that of experimentation such as trialling different

Australian trees. Second, was choosing trees to benefit wildlife or for a specific purpose such riparian planting. For example, one interviewee who had a key aim of leaving the land in better condition that he found it, had planted thousands of trees of twenty-five species, especially "flowering natives" to attract birds. He located them to protect riparian areas and to form a vegetation corridor across his land. Third, was planting specifically for regeneration of existing native vegetation as a goal in its own right.

Most interviewees were not actively managing for restoration or regeneration of native vegetation, though most were interested in protecting vegetation on their land. Some were effectively maintaining the property as they found it, for example by slashing at the margins of native vegetation to maintain pasture and control invasive plants. Thus in most cases, vegetation management consisted of sympathetic or benign neglect. Ten interviewees, including those whose primary residence was elsewhere, however, were actively undertaking restoration, mainly at the margins of existing patches of native vegetation or along riparian corridors.

The activities of four of these ten are particularly interesting for their enthusiasm for vegetation restoration. They are prepared to spend considerable time and/or other resources on removing unwanted vegetation on the margins of native vegetation, planting trees or facilitating regeneration, and fencing vegetation to protect it from stock. The choice of plantings by various interviewees here was determined by advice from local government, attempts to replicate what was coming up, and by seed obtained from adjoining properties. This interest in restoration is not exclusive of running stock semi-commercially, nor, to a lesser extent, of having views that land should be used "productively" for agriculture or grazing. There was, however, among them a strong

view that their management represented a break with less careful management in the past and that under their ownership there was improved stewardship of the diverse values of the land – be they production values, conservation values, or aesthetic values. One said that he saw himself as "winning nature back" as he removed lantana, replanted trees, and grazed cattle and others of this group expressed similar sentiments, particularly regarding invasive species.

We have highlighted these four for their intensive efforts at native vegetation restoration. Many of the other interviewees, including those who have stock, while favourably disposed to native vegetation protection were too new as owners or were too involved in activities such as housebuilding to have substantively turned their efforts to native vegetation management. Indeed, eleven interviewees indicated that they were having trouble meeting their land use and management intentions, including weed and vegetation management, due to competing demands on their resources from the land and from their domestic and work lives.

The characteristics of interviewees are consistent with some observations of farmers, how they perceive their land use and management, and how extension for NRM must take this into account (Vanclay, 2004). First, there is a strong interest in "doing the right thing" in terms of property management for production and NRM; though the "right thing" or "good management" is variable and dynamic. Second, like farmers these NRLs, especially those with stock, do not make strong or necessary distinctions between environmental and other land use and management issues. They do not see contradictions between production and consumption but integrate them into the management of their land as whole. As one of the four active restorationists said of their

ideas of rural life and land use, we aren't "fanatical environmentalists…[we keep animals]… you need animals when in the country". In short, they have a strong sense of land stewardship and like farmers, this is an holistic concept of stewardship and one under ongoing construction. Third, stages in the lifecycle of landowners families and in their time of ownership are significant in determining their priorities for management. Our interviews suggest periods of familiarisation, of shock at the magnitude and cost of the task, of focus on housing and domestic space, of developing infrastructure, of testing and trying, of gradual machinery acquisition, and of intense effort to reshape the property to their aspirations. The unfolding of issues and stages, as well their own family and personal lifecycles, are shaping the land management practices and priorities of the interviewees.

The case of one further interviewee, who did not actively plant on the edge of native vegetation but protected trees that came up, emphasises a point that is evident in the practices of other interviewees who are variously removing invasive species and planting. This interviewee was selective in which species he nurtured. Those species, mainly larger trees that he considered "good" he would leave as long as his pasture was not unacceptably encroached upon. He would remove other plants, natives and exotics, some considered weeds, which he referred to as "rubbish". This distinction between undesirable plants and desirable plants was also seen in the case of other interviewees. Desirability was largely associated with "rainforest", various types of which were once more abundant in the area and which today are limited in extent (Kevin Mills and Associates, 2006), and certain species particularly Red Cedar (*Toona ciliata)*, an iconic species in the region. Apart from invasive weeds, undesirability was associated strongly with black wattle (*Acacia mearnsii)*, described as "rubbish", as "taking nutrients out of

the soil", and as invasive and a problem for rainforest regeneration. Other interviewees were planting or nurturing trees species considered by management agencies as invasive and a problem either regionally or nationally. Our point here is not to judge the desirability of certain species, successional stages, or vegetation types over another, but is to note that interviewees are making strong judgements about what plants belong, what constitutes acceptable types of vegetation, and about the landscape aesthetics that they provide. Our interview schedule and resources did not permit further exploration of this area but as with urban gardening (Head and Muir, 2007) this process of boundary making has significant implications for what kind of restoration landholders are undertaking, the kind of ecologies that they are creating, and the relationship of this process to regional conservation goals and ecological management.

In relation to restoration practices, we are cognisant of Kearney and McLeod's (2006a) finding that despite NRM activities, ecosystem health on NRL land was poor, and of Gosnell et al's (2006) observation that

> Amenity ranchers are in a financial position to relax ranching intensity, but may not take a comprehensive ecological approach to restoration (p.755).

To what extent could these observations apply to the practices of NRLs in Jamberoo Valley? First, although there are several Landcare and related groups in the area (Harris, 2002) there was little indication that landowners were working across boundaries in a coordinated manner. Interviewees were focussed on their own land and undertaking restoration efforts as suited their own purposes and values. Even on a community title land with an active NRM group and a management plan, adjoining land

parcels are subject to radically different management providing a dramatic example of Kearney and McLeod's observations of fragmentation by divergent management (Figure 4).

Second, those undertaking significant restoration work are either getting advice on what to plant, are sourcing local seed, or are observing what regenerates spontaneously and largely seeking to replicate it. Consistent with our designation of most vegetation management as benign neglect, however, interviewees are practising edge management. That is, they are working on the margins of vegetation to contain it by slashing, expand it by weeding and planting/regeneration, or to fence it and keep stock out. Two said that there were parts of their land they had not been into as it was either steep or thickly vegetated and difficult, if not impossible, to move through. In essence, and despite the amount of restoration work being done, it seems possible that much of the native vegetation on NRLs' land is effectively abandoned and not actively managed beyond the edges nor in a strategic manner across boundaries.

Finally, for interviewees, weed management was a major preoccupation and task. While some said that they thought their weed management was currently inadequate, most were spending considerable amounts of time and money on weed removal and slashing. The main foci of their activity were fireweed (*Senecio madagascariensis*) and lantana. The key drivers were pasture maintenance or reclamation, and restoration of native vegetation.

In sum, there are a range of positive aspects to NRL vegetation management and restoration, but also questions as to its effect and effectiveness at both the land parcel

and landscape scale. Many of the interviewees are putting significant resources into restoration activities and are strongly motivated to enhance land stewardship. Active native vegetation management, however, is largely confined to edges and is not occurring in a strategic and collaborative manner.

6. Towards a Stewardship Framework for NRLs

The case of Jamberoo shows that the common tendency to see NRLs in negative terms and as a "problem" is simplistic and risks misunderstanding the constraints and opportunities for NRM that NRLs represent. NRLs, like any group of landowners, including traditional farmers, are a diverse group. Certainly, NRL senses of stewardship varied and these attitudes warrent further ethnographic and survey-based investigation. However, the Jamberoo Valley case suggests three types of NRL stewardship based in professed values and aspirations as well as in likely land management practices (Table 2). We present them as discrete categorisations but like most typologies they more truthfully lie on a continuum. Any landowner could be judged to subscribe to a form of stewardship to a greater or lesser degree.

Many of the landscape scale NRM problems that are present in areas of high rate of NRL landownership may be significantly structural and the outcome of broader processes such as planning and land tenure and land use history rather than simply related to the practices of NRLs as a group or as individuals. Poor weed management, for example, is present on various land tenures and can be an outcome of farm succession issues as much as the practices of NRLs. This is not to say that the presence of NRLs is without its problems and challenges. Interviewees for this project, overall, represent a new wave in plant introductions at relatively high intensities via garden

establishment. Similarly, their newness to land management, while representing a hiatus of knowledge as farmers leave and NRLs establish themselves, may be offset by their experimentation and generation of new forms of knowledge that traditional farming communities may not hold due to their different orientations and needs.

Our findings show that the primary drivers of land purchase, use, and management by NRLs are factors associated with family and lifestyle. In our study, investment was not an important factor, including for part-time residents, though this may a consequence of our sampling strategy. Interviewee land use and management goals are linked to providing desirable environments for their children and themselves. Decisions to run stock or to grow crops largely exist within these priorities. In this sense the common distinction between lifestyle or amenity owners on the one hand and production or commercial landowners on the other, misses the fact that for NRLs who run stock, amenity or lifestyle outcomes are found within the labour and challenge of production. "Production" on rural land and "consumption" of rural land through lifestyle oriented occupation are collapsed at the land parcel level and in the lives of many NRLs. Categorising landowners as "lifestyle" owners or production/commercial owners not only simplifies what NRLs do and why, but it also glosses a grey area where the activities and rationales of NRLs and traditional farmers, for whom non-monetary motivations can be highly significant, (Brodt *et al.*, 2006, Vanclay, 2004) may coincide. Production by NRLs is therefore not something that should be interpreted lightly. Those NRLs who undertake activities such as raising cattle, not only see this as a productive use of land with normative value but its monetary outcomes help them to occupy their land and sustain their rural lifestyle. Sustainability for many NRLs, as for many farmers, *may* be more about their ability to stay on the land, to weather its financial and

workload impositions, and to realise their vision of the land, than about than environmental processes and issues per se (Gill, 2003, Vanclay, 2004)

The research also indicates that trajectories of land management by NRLs are variable and complex. There are many types of NRLs as the typologies proposed elsewhere show. As in the case of farmers they are influenced not only by their land use aspirations and values but also by the nature and state of the land they buy, by their neighbours, and by their personal, financial, and family circumstances. In this paper we have suggested that NRLs senses of stewardship may be similar in some ways to traditional farmers but further research in this is warranted.

While questions remain about the landscape scale and cross-boundary effectiveness of NRL restoration efforts, interviewee interest in enhanced stewardship of some form is strong. Most common was a passive approach whereby NRLs fenced vegetation and/or saw themselves as somehow protecting it but actually did relatively little – what we term "benign neglect" but which may also be seen as effective abandonment and which may represent little change from past land use regimes. Those who were undertaking restoration, however, were doing so with passion and commitment, even if they too tended to focus on vegetation edges.

7. Conclusion

This case study of a highly valued valley close to a major metropolitan area has revealed a dynamic range of values, aspirations, and activities that are reshaping its land cover and ecologies. This process of reshaping is both passive and active insofar as it relates to the circumstances and intentions of different types of landowners. For what is

ostensibly one group of landowners, lifestyle-oriented landowners, we have presented material that illustrates their internal differentiation and their diverse approaches to land use and management. We have proposed a framework based around stewardship concepts that characterise this diversity and links values with practices. Across this material we have also discussed a range of social and cultural processes that challenge distinctions between production and consumption on "lifestyle" rural land and which require further investigation to establish their significance for the landscapes that NRLs are creating. We have also highlighted the role of influences, decision-making, and choices about plants, restoration, and the desirability or otherwise of certain types of vegetation. Both these areas present challenges for research and NRM. In particular they present opportunities for research that explicitly aims to examine the interrelationships between and among plants, people, and diverse influences on decision-making that are shaping ecologies at the landscape and property scales. These interrelationships, and the values, processes and practices they embody, are collectively contributing to the future character of high value landscapes close to major urban areas.

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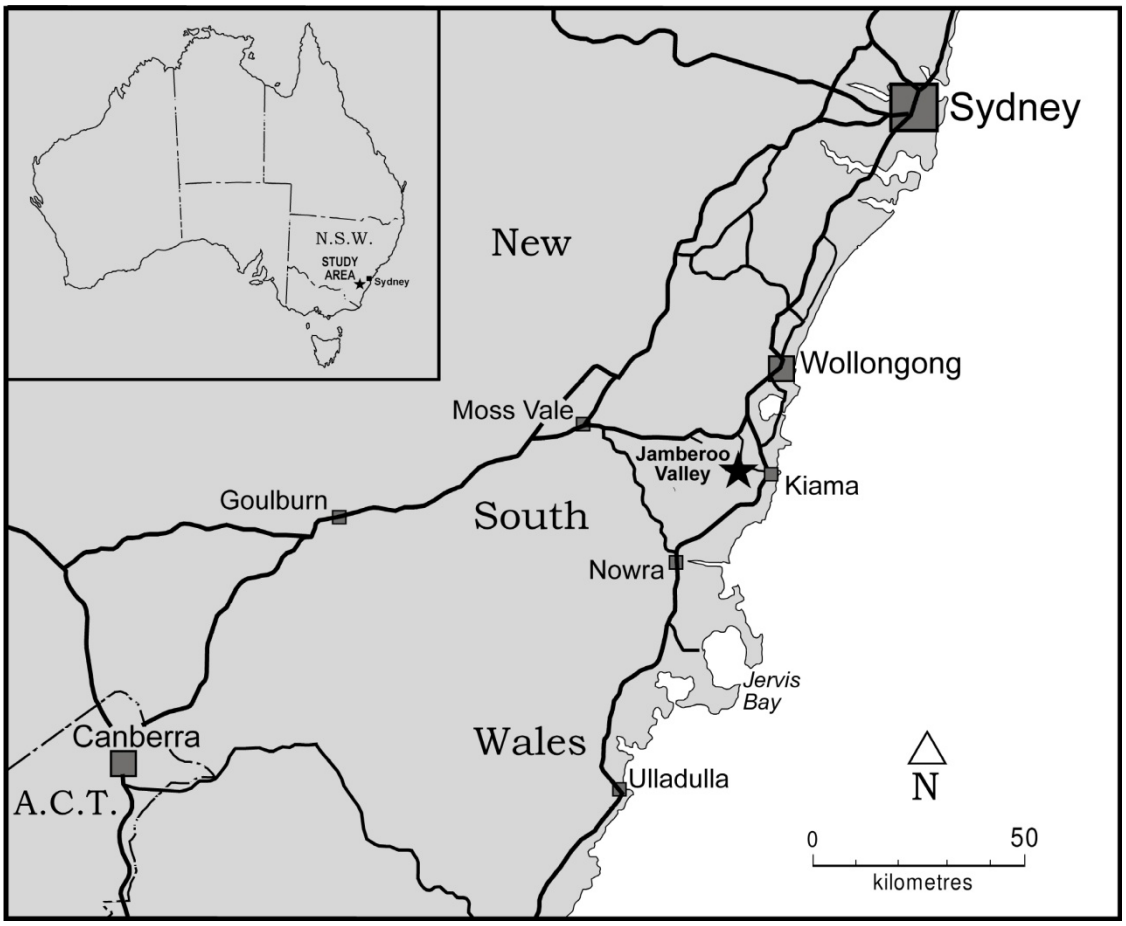

Figure 1. Jamberoo Valley location, south of Sydney and Wollongong

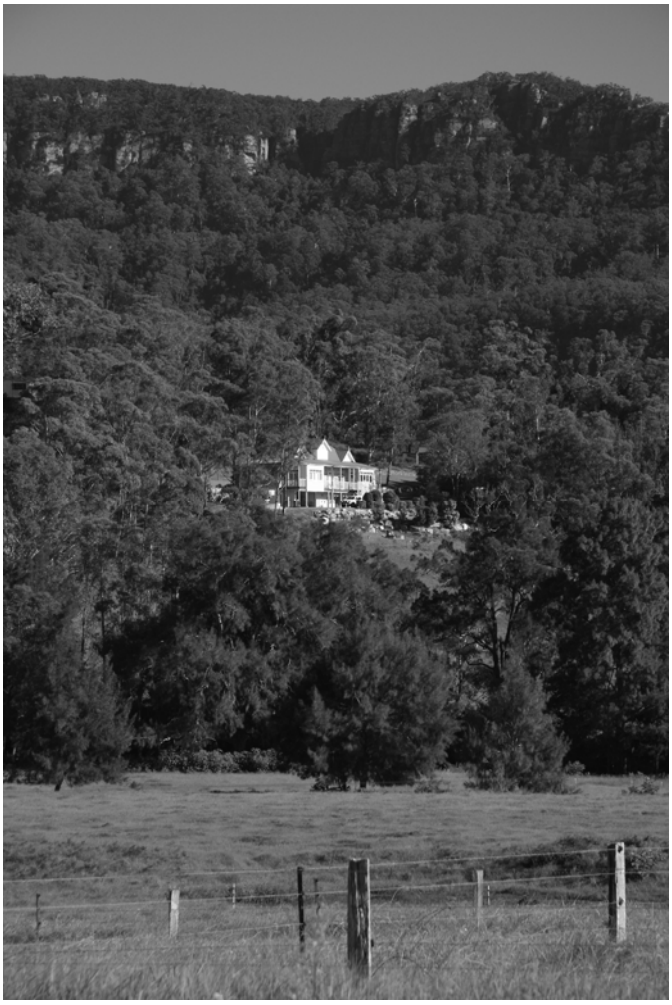

Figure 2. Jamberoo Valley landscape and NRL house 2008

Grazing basis	Total	%
No stock	9	36
Non-commercial	4	16
Semi-commercial	12	48

Table 1. Grazing Activity by Interviewees

Note: “Semi-commercial” includes all interviewees who run stock and who said that they run stock for sale in order to generate income.

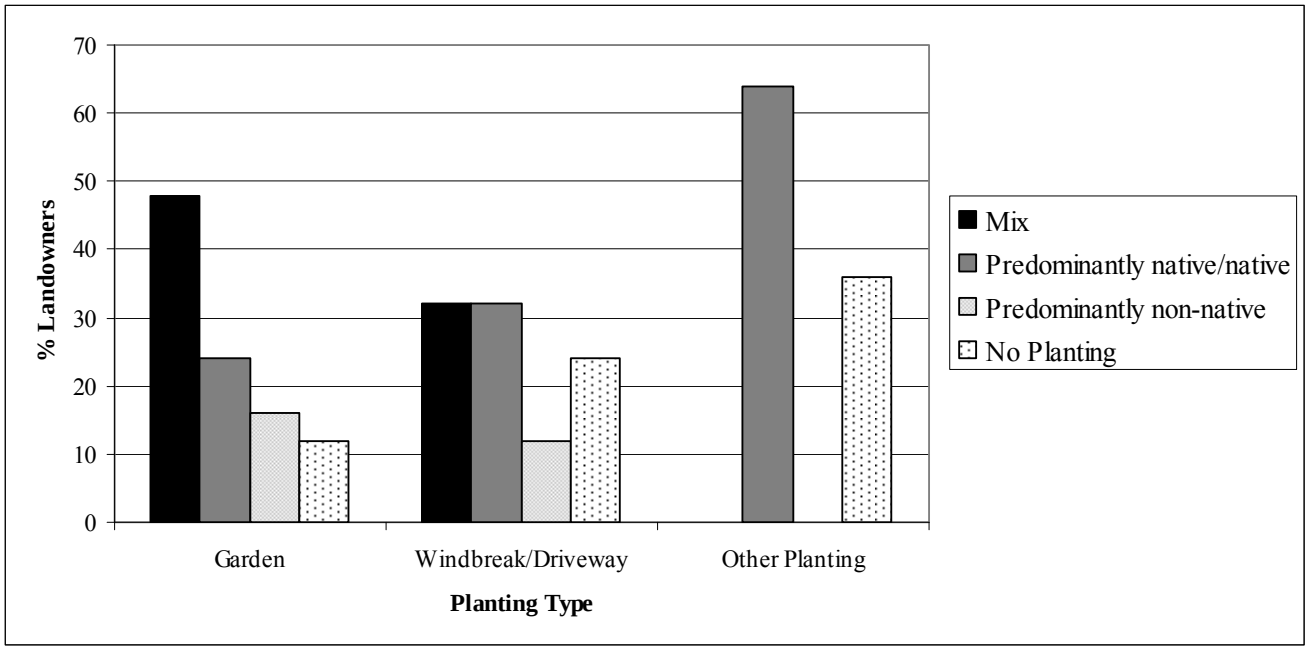

Figure 3. Planting Composition by Location on Property
Note: Each planting type sums to 100%

(a)

(b)

Figure 4. Contrasting Management of Contiguous Vegetation on Adjoining Land Parcels 2008

Note: Slashing and mowing is practised in (a) and is absent in (b). Prior to current ownership the land in (b) was also slashed and mown. The current owners have allowed regrowth of the understory layer for ecological reasons. Both photos were taken on the property boundary from the same point looking in opposite directions.

Stewardship Type	Description	Possible Activities/Outcomes
Lifestyle Agrarian	Akin to traditional rural or farming senses of stewardship: use and husbandry of land resources occurs through production and conservation is deemed a sensible and entirely compatible part of farm management. In the case of NRLs, where financial imperatives are less than those of farmers, there is often an emphasis on improving management from the past.	- Focus on pasture and herd management and improvement. - Fencing of existing native vegetation and riparian protection. - Eclectic plantings of natives and non-natives for aesthetic and practical reasons, local species not a priority.
Regenerative	Interest in improving land management as a whole with improved ecological management and restoration as important goals. Production goals are often present but they may be equivalent or subservient to conservation goals.	- Significant efforts at replanting or restoration of native vegetation. - Emphasis on local plant species for restoration - Extensive weeding and slashing. - Semi-commercial grazing, cropping, or horticulture. - Pasture management important but improvement efforts likely to be limited or sporadic. Grazing management, herd size, and slashing more important tools.
Conservationist	Primary focus is on ecological restoration and/or provision of habitat. Agricultural land use is perceived as having had largely negative consequences, some of which are ongoing, and NRL ownership is seen as an opportunity to remedy past mistakes even if in a small way.	- Extensive efforts at replanting or restoration of native vegetation. - Extensive weeding. - Local species usually preferred but "Australian natives" or non-natives may meet their aims. - No stock or only small numbers of "recreational" animals on recovering pasture.

Table 2: Forms of Stewardship among New Rural Landowners